PM-501

User's Manual

Introduction

1. Please keep this User's Manual for later reference.
2. Please disconnect this equipment from connecter before cleaning. Don't use liquid or prayed detergent for cleaning. User moisture sheet or cloth for cleaning.
3. Make sure the equipments are connected to the power source with the correct voltage, frequency, and ampere.
4. All cautions and warnings on the equipment should be noted.
5. Never pour any liquid into opening: this could cause fire or electrical shock.
6. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.
7. Please read these safety instructions carefully
8. If one of the following situations arises, get the equipment checked by a service personnel:
   a. Liquid has penetrated into the equipment.
   b. The equipment has been exposed to moisture.
   c. The equipment has not worked well or you cannot get it work according to user manual.
   d. The equipment has dropped and damaged. If the equipment has obvious sign of breakage.

e. Caution on use of battery: User the battery recommended by the manufacturer or the same type of battery installed by the manufacturer. If incorrect battery is used, it may cause explosion or fire hazard. Recycle or discard used batteries according the manufacturer's instruction or your local authority.

f. The computers use nonvolatile memory that requires a battery to retain system information when power is removed. The 3V lithium battery is on the system board. The battery life depends on the amount of time the computer is powered on. If the computer does not display the correct time and date, replace the battery.

IMPORTANT：Loss of BIOS settings occurs when the battery is removed. BIOS settings must be reconfigured whenever the battery is replaced.

WARNING：A risk of fire and chemical burn exists if the battery is not handled properly. Do not disassemble, crush, puncture, or short external contacts, or expose the battery to temperatures higher than 60 °C (140 °F). Do not dispose of a used battery in water or fire.

CAUTION：Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC RF Radiation Exposure Statement:

1. This Transmitter has been demonstrated co-location compliance requirements with Wi-Fi, Bluetooth and RFID=modules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device was tested for typical hand held operations with the device contacted directly to the human body to the back side of the tablet pc. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC and EMC directive 2004/108/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC and EMC directive 2004/108/EC:

- EN 55022: 2010
- EN 61000-3-2 : 2006 +A2:2009
- EN 61000-3-3 : 2008
- EN 55024: 2010
  (IEC 61000-4-2: 2008;
  IEC 61000-4-3: 2010;
  IEC 61000-4-4: 2011;
  IEC 61000-4-5: 2005;
  IEC 61000-4-6: 2008;
  IEC 61000-4-8: 2009;
  IEC 61000-4-11: 2004)
- EN 60950-1: 2001
  Safety of information technology equipment
- EN 300 328 V1.7.1: 2006
- EN 300 330 V1.7.1
- EN 301 489-1 V1.8.1: 2008
- EN 301 489-17 V2.1.1: 2009
- EN 62311: 2008

This device is a 2.4GHz wideband transmission system (transceiver), intended for use in

all EU member states and EFTA countries under the following conditions and/or with the following restrictions:

- In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.
- This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

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Chapter 1

General Information

1.1. Introduction

PM-501 semi-rugged tablet PC is Intel® Menlow Atom Z530 1.6GHz processor core architecture based Semi-rugged Tablet PC with a bright 10.1-inch LED backlight LCD display. The powerful CPU brings the most dynamic applications to life without sacrifices to any industrial reliability.

Delivering a variety of connectivity features, built-in USBs, Microphone and Headphone port. It is ideal for an all-around system performance. Furthermore, PM-501 semi-rugged tablet PC is equipped with fanless design.

1.2. Specification

The PM-501 semi-rugged tablet PC is a flexible, multi-functional flat tablet PC. With following specifications that can be applied in diverse operational environments and implemented in multi-faceted applications.

1.2.1. Main System

- **Platform:**
  - Intel® Menlow Platform
- **GPU :**
  - Intel® Atom Z530 1.6GHz
  - On-die L2 Cache : 512KB
  - FSB Speed : 400MHz
- **Chipset:**
  - Chipset : Intel® US15W
- **BIOS :**
  - Phoenix BIOS
- **Graphics :**
  - Intel® HD Graphics with dynamic frequency, support MPEG2, MEPG4, VC-1, WMV9 and H.264
- **System Memory :**
  - DDR II 800, up to 2GB
- **Storage :**
  - 1 x 32GB micro-SATA Solid State Disk
- **LCD Screen :**
  - Panel size : 10.1-inch LED Backlight LCD

- Brightness : 200nits
- Resolution : 1366 RGB(W) x 768(H) WXGA

- **Touch Panel :**
  - 5-wire Resistive Touch Panel
- **Outdoor Viewable :**
  - Transflective plus type
- **Audio :**
  - Internal Speaker : 2 x High Quality Speakers (2W)
  - Internal Microphone : 1 x in front Bezel
- **TPM :**
  - 1 x Compatible with TPM1.2 (option)
- **Communication :**
  - 1 x Wireless IEEE 802.11 b/g/n
  - 1 x Bluetooth 2.1 + EDR
- **RFID (NFC) :**
  - Frequency : 13.56MHz ±7KHz
  - Reading Range : within 40 ~50mm depending on type of tags
  - HF RFID Reader :
    - ISO/IEC 14443A/B, 15693
    - Mifare 1K/4K, Ultralight
    - NFC-IP1 Protocol
- **Webcam :**
  - Front Bezel: 1.3 Mega-pixel Camera audio input (Digital Microphone) functions.
  - Rear Bezel: 2 Mega-pixel Camera, LED auxiliary light.

1.2.2. I/O Interface

- **External I/O :**
  - 2 x USB 2.0 type A
  - 1 x Headphone Jack
  - 1 x Microphone Jack
  - 1 x Docking Connector
  - 1 x DC-Jack
- **LED Status Indicator:**
  - Power LED Status: 1 x Green/Orange/Red Colors
  - Storage LED Status: 1 x Blue Color
  - Wi-Fi LED Status: 1 x Blue Color

1.2.3. In Front Control

- **Switch :**

- 1 x Power Button
- 1 x Lock Button
- 1 x RF Button

- **Button :**
  - Navigation Buttons : 5+ Way navigation button with integrated enter button
  - Program Function Buttons : 5 x Function keys (Programmable)
  - Barcode Buttons : 2 x Trigger Buttons (Programmable)
- **Sensor :**
  - 1 x Light Sensor

1.2.4. Power Management

- **Power Adapter :**
  - AC to DC, 19VDC@3.42A, 65W
  - AC 100V ~ 240V, 50~60Hz input
  - 19 DC-in
- **Battery (Internal Battery) :**
  - Internal Smart Lithium Polymer Battery, 3800mAh

1.2.5. Environment

- **Operation Temperature :**
  - -10°C to +50°C (MIL-STD-810G Method 501.5 and 502.5)
- **Storage Temperature :**
  - -20°C to +60°C (MIL-STD-810G Method 501.5 and 502.5)
- **Humidity :**
  - 5-90% without condensation (MIL-STD-810G Method 507.5)
- **Drop :**
  - 5-ft drop to Plywood (MIL-STD-810G Method 516.6 Procedure IV)
- **Vibration :**
  - Operating : SSD (MIL-STD-810G Method 514.6 Category 4 Fig 514.6C-3)
- **Mechanical Shock :**
  - Operating : 20g, 11ms, Terminal sawtooth
  - Non-operating : 40g, 11ms, Terminal sawtooth (MIL-STD- 810G Method 516.6 Procedure I)
- **Water/Dust Resistance :** IP55 equivalent

1.2.6. Material

- **Chassis :**
  - Semi-Rugged Tablet PC Slate
- **Enclosure :**
  - PC/ABS Plastic, PC/ABS and TPU Double Injection with Protective Rubber Grips Set
- **Dimension (W x H x D mm) :**

- 275.4 x 203.6 x 26.5mm

- **Weight :**
  - Approximate 1.1kg (with internal battery)

1.2.7. Operation OS

- Win XP Embedded and Win XP Pro. Embedded

1.2.8. Certifications

- **EMI :**
  - FCC part 15 Class B
  - CE (EN55022 / EN55024)
  - VCCI (V-3/V-4)
- **Safety :**
  - CE (EN60950-1)
- **RF :**
  - FCC part 15 subpart C
- **SAR :**
  - FCC SAR (OET 65 C)

1.2.9. Optional: Internal Module

- **3.5G :**
  - **Protocol :**
    - HSUPA/HSDPA/UMTS/EDGE
  - **Frequency :**
    - UMTS/HSUPA/HSDPA 850/900/1800/2100MHz
    - GSM/GPRS/EDGS 850/900/1800/1900MHz
- **Gobi3000 :**
  - **Protocol :**
    - HSUPA/HSDPA/UMTS/EVDO/EDGE
  - **Frequency :**
    - UMTS/HSUPA/HSDPA 850/900/1800/2100MHz
    - CDMA/EVDO 800/1900MHz
    - GSM/GPRS/EDGS 850/900/1800/1900MHz

1.2.10. Optional: External Accessories

- **MSR :**
  - **Reference Standards :**
    - ANSI/ISO Standards 7810,7811-1/6, 7813
    - JIS II
  - **Decoding Method :**
    - ISO Track1 - IATA , Track2 - ABA and Track3 – THRIFT

- **Barcode Scanner :**
  - **Decoded Mode :**
    - 1D Symbologies : EAN/UPC, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, postal codes.
    - 2D Symbologies: Data Matrix, PDF417, Micro PDF 417, Maxicode, QR, Aztec, EAN.UCC composite.
- **GPS :**
  - **Channel :**
    - 50 channel all-in-view tracking
    - 1 x Signal Color LED (Blue)
  - **GPS Channel :**
    - 50 channel all-in-view tracking
    - 1 x Double Color LED (Red & Blue)
    - 1 x Microphone
- **Desktop Docking :**
  - 4 x USB2.0 type A, 1 x Ethernet, 1 x VGA, 1 x Kensington and 1 x DC Jack support
- **External Battery Kits :**
  - **External Battery Pack :**
    - Hot-swappable Lithium Polymer battery pack - doubles duration of mobile operation, 4200mAh (2S1P), 7.4V
  - **External Battery Charger :**
    - Recharges external battery pack
  - **Vehicle Application Accessories :**
    - **Vehicle Mounting Docking :**
      - 4 x USB2.0 type A, 2 x RS232, 1 x 10/100Mbps Ethernet, 1 x VGA and DC-Jack support
      - 75 x 75/100 x 100mm Vesa Mount Holes support
      - 6VDC to 36VDC Input (6VDC to 36VDC for Momentary and 9VDC to 32VDC for Normal)
      - 19 V@1.57A Max., total output 30W
      - Cigarette lighter plug power cord
      - ACC power cord (option)
      - GPS (option)

1.2.11. Optional: Packing Lists

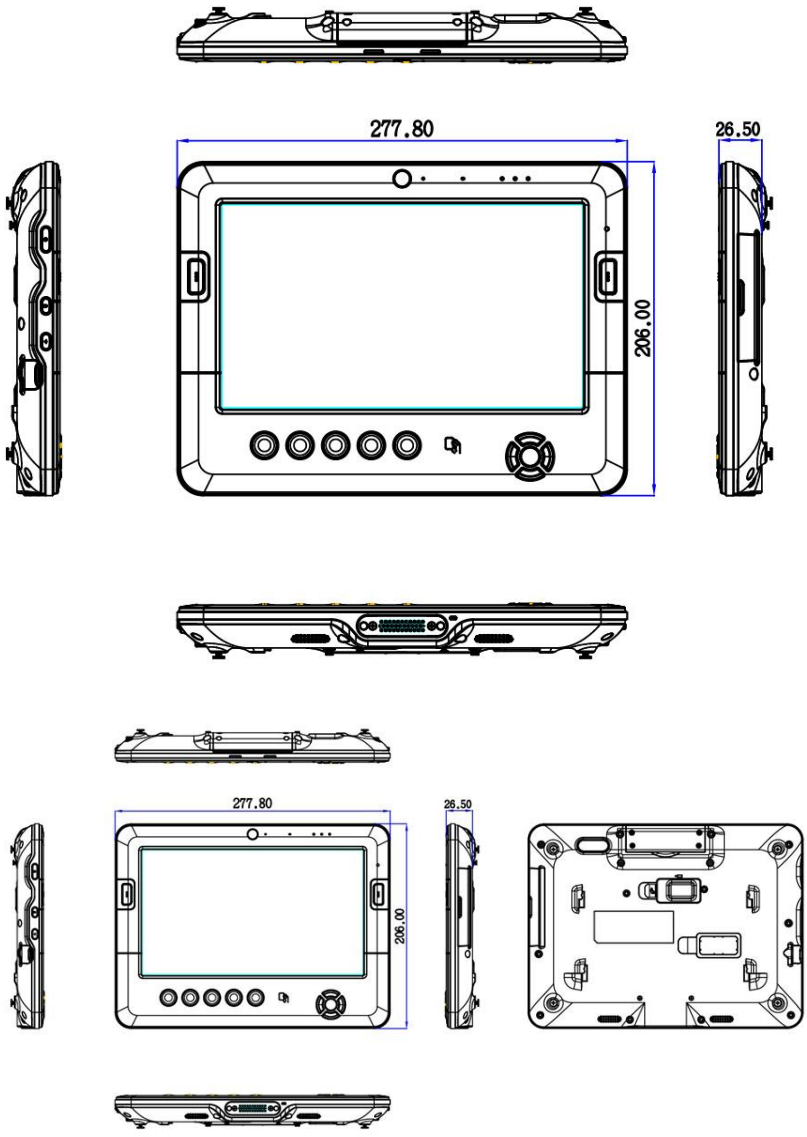
- Carrying Case & Handle Secures
- 1.3. Packing List

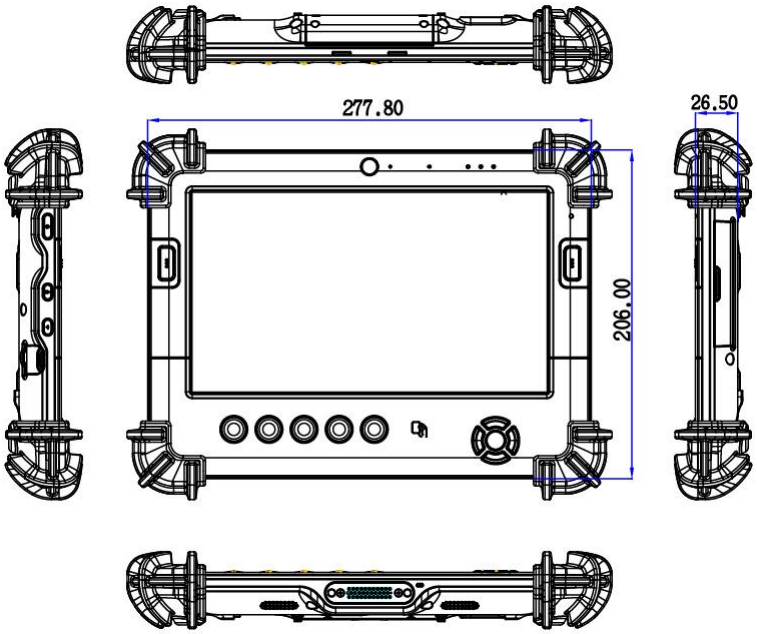
Main Packing List	QTY				
Main system	1	Desiccant	1	Quick Setup Guide	1
Power Adapter	1	Power Code	1	Corner Rubber Screw	4
Corner Rubber	4	Shoulder Strap	1	Hand Strap	1
Stylus	1				
Accessories (Option)	**QTY**				
Barcode Scanner	1	MSR	1	DeskTop Docking	1
Vehicle Docking	1	Vehicle Bracket	1	Vehicle Power Adapter	1
Battery Charger	1	GPS	1	GPS/GPRS Tracker	1
Carrying Bag	1	Handle Secures	1	More	

1.4. Dimensions

The following sections provide information for the PM-501 dimensions.

Dimensions (units in mm)




277.80
26.50
206.00

Chapter 2

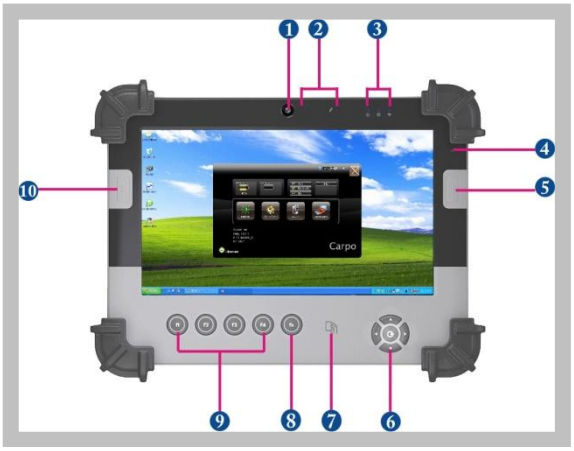
System Setup

2.1. Exploring Your PM-501

Before starting to set up the PM-501, take familiar with the locations and purposes of controls, drives, connectors and ports, which are illustrated in the figures below. When placed upright on the desktop, the front panel of the PM-501 appears as shown in Figure 2.1.

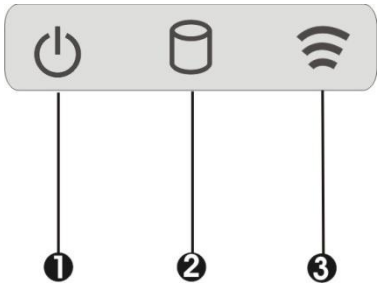
2.1.1. The front side of the PM-501

The front side of the PM-501 is equipped the I/O as described below.



1. Camera/1.3 Mega-pixel
2. Digital Microphone
3. LED Power/Storage/Wi-Fi
4. Light Sensor
5. Barcode Button
6. Navigation Buttons
7. RFID
8. User Interface Button
9. Program Function Buttons
10. Barcode Button

- **Camera/1.3 Mega-pixel**
  The built-in camera can be used as a communication device for allowing you to capture images, record videos, and have video chats. It is 1.3M pixels and transmitting instant image through network for conference.
- **Digital Microphone**
  The built-in microphone receives sounds and voices when used with the built-in camera.
- **LED Power/Storage/Wi-Fi**
  Keeps you informed of your system's current power status, Storage operating status, and Wi-Fi accessing status.



1. Power Indicator LED 2. Storage Access
3. WiFi Access

- Power Indicator LED
  To let you know that system is turned on and indicate the battery charging status.
  - < Lights green when the system is powered on and battery is discharged.
  - < Lights blinking green when the system is in S3 Suspend.
  - < Lights orange when the system is powered on and battery is charging.
  - < Lights blinking orange indicates that the battery is in charging and system is power off.
  - < Lights off when power off.
  - < Lights blinking red when the Internal Battery =< 10%. (External Battery = 0%)
  - < Lights blinking red when the system is in S3 Suspend and the Internal Battery =< 10%. (External Battery = 0%).
- Storage Access
  When LED in blue light indicates that the system is accessing the Storage Drive.
- WiFi Access
  When LED turns on in blue light indicates that the WiFi/Bluetooth/3G accessing is activated. When LED lights off, it indicates that the function is disabled.

- **Light Sensor**
  This sensor works with brightness control. When you set the brightness control to Auto (for details, please refer 5.3.1), it will automatically detect the light environment, and adjust the screen brightness according to the operating environment.
- **Barcode Button (Right Side)**
  When Scanner is scanning the Barcode, please press Barcode Button simultaneously to enable this function.

  If your system does not install this module, this button can be programmable to execute specific application. When you program your application, please write this directory as listed below into your configuration file, then the system will aware and execute this application.

```
EXE="C:\WINDOWS\system32\mspaint.exe"
F5_PARA=""
F5_PATH=""
```

- **Barcode Buttons (Left Side)**
  When Scanner is scanning the Barcode, please press Barcode Button simultaneously to enable this function.

  If your system does not install this module, this button can be programmable to execute specific application. When you program your application, please write this directory as listed below into your configuration file, then the system will aware and execute this application.

```
EXE="C:\WINDOWS\system32\calc.exe"
```

F6_PARA=""
F6_PATH=""

- **Navigation Buttons**

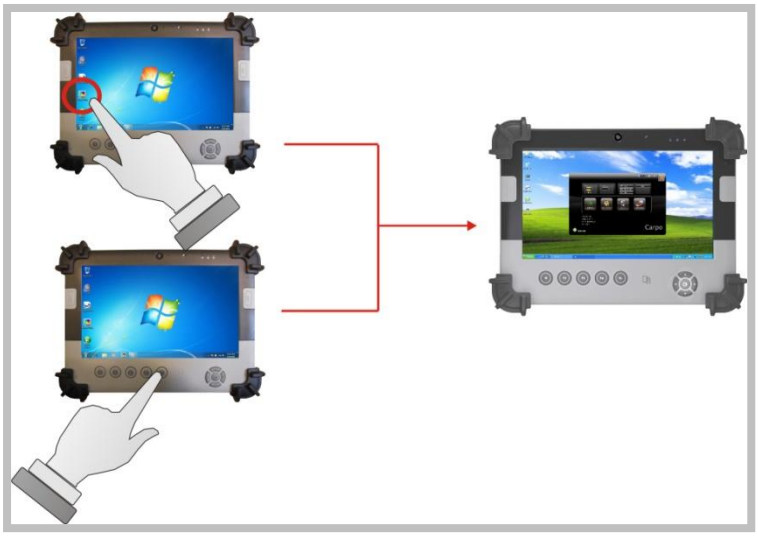
  The navigation buttons include up, down, right, and left arrow keys and the Enter key in the center.

  This function lets you press the arrow keys to move the cursor up, down, right, or left on the screen, after that press Enter to execute the function.

- **RFID**
  Data/files transferring from the IR-equipped or equivalent device to your PM-501 System. This port only can receive data or files from other RFID-equipped or equivalent device.

- **User Interface Button**

  This button is used to define the User Interface function. When you press this button, the system will appear the UI screen as illustrated below for executing the applications easily and quickly.



- **Programmable Function Buttons**

  If your system does not define this button's function, this button can be programmable to execute specific application. When you program your application, please write this directory as listed below into your configuration file, then the system will aware and execute this application.

[Setup]

F1_EXE="c:\windows\explorer.exe"
F1_PARA=""
F1_PATH=""

F2_EXE="C:\Program Files\Windows Media Player\wmplayer.exe"
F2_PARA="/prefetch: 1"
F2_PATH=""

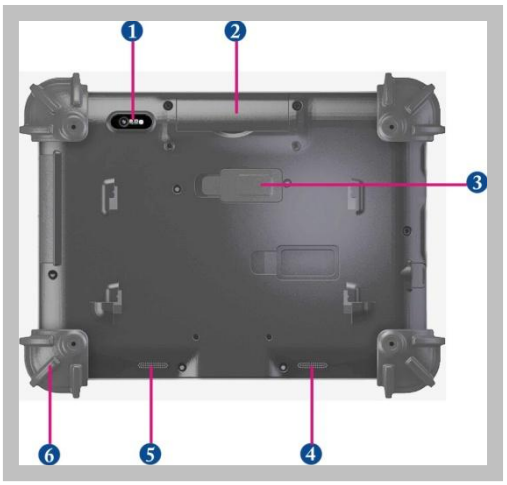
F3_EXE="C:\WINDOWS\system32\osk.exe"
F3_PARA=""
F3_PATH=""

```
F4_EXE="C:\WINDOWS\system32\taskmgr.exe"
F4_PARA=""
F4_PATH=""
```

The configuration file is "c:\FKeySet.txt"

2.1.2. The rear side of the PM-501

The rear side of the PM-501 is equipped the I/O as described below.

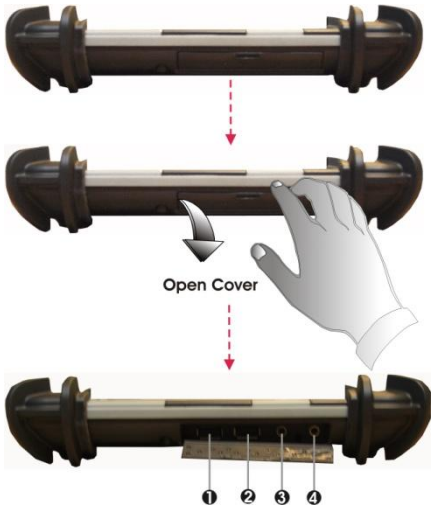


1. Camera/2 Mega-pixel
2. SIM Card/Optional Accessories Door
3. External Battery Connector
4. 5. Speaker 6. Protective Rubber

- **Camera/2 Mega-pixel**
  The built-in camera can be used as a communication device for allowing you to capture images, record videos, and have video chats. It is 2.0 M pixels and transmitting instant image through network for conference.
- **SIM Card/Optional Accessory Door**
  After you remove the screws on top side of the system, you can install the SIM card and the barcode scanner, or SIM card and the car reader modules.
- **External Battery Connector**
  To install the External Battery, please remove the cover of external battery connector before snap the battery pack into the external battery connector (For details, please refer 3.4).
- **Speaker**
  Integrated left and right mini stereo speakers for sound and audio output for your multimedia presentations or listening pleasure.
- **Protective Rubber**
  To prevent system harm from vibration or shock, the system has been designed with installing four protective rubber at the four corner.

2.1.3. The right side of the PM-501

The right side of the PM-501 is equipped the I/O as described below.



1. Microphone port
2. Headphone port
3. USB port
4. USB port

- **Microphone port**

  Allows you to connect an external microphone for monophonic sound recording directly into your Tablet PC.

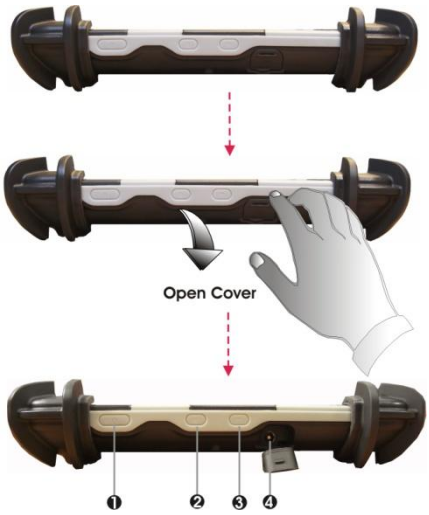
- **Headphone Port**

  Lets you plug in a stereo headphone, powered speakers, or earphone set for personal listening.

- **USB Ports (x2)**

  The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your Tablet PC.

2.1.4. The left side of the PM-501



1. Power Button
2. Lock Button

3. Wi-Fi Button 4. DC-Jack

- **Power Button**

  Switches the computer power on and off, or resumes whenever it is in Suspend mode.

- **Lock Button**

  To prevent the screen or function keys have been touched by random, you can press the Lock button to halt the system temporarily; the screen will appear **Lock** message.

To make the system back to work, press the Lock button again to disable the halt function, the screen will appear **Unlock** message.

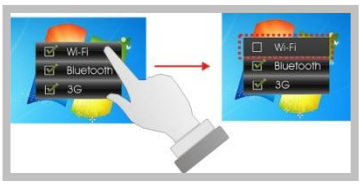
Note: *When you press the lock button, please hold for 1 second to activate or close this function.*

- **Wi-Fi Button**

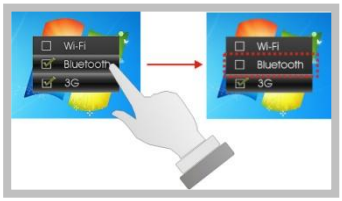
  Press this button to activate or close the Wi-Fi, Bluetooth or 3G utility.

  When you press the Wi-Fi Button, the screen pops-up the option list for your selection.

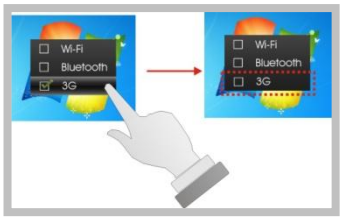
You can see all functions in this option list have been ticked. To close any function, please touch the option to close the execution as shown in the following graphics.



Close Wi-Fi function

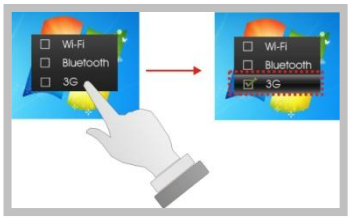


Close Bluetooth function

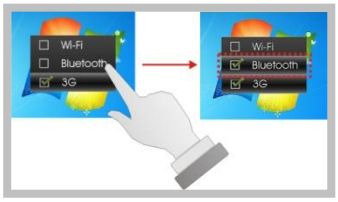


Close 3G function

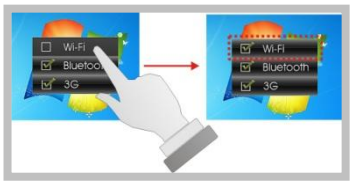
To activate the function, please again tick the option as shown in the following graphics to make the function enable.



Activate 3G function



Activate Bluetooth function

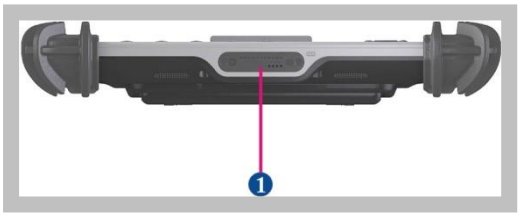


Activate Wi-Fi function

- **DC-Jack**

  Lets you connect the AC power adapter in supplying continuous power to your Tablet PC and recharging the battery.

2.1.5. The bottom side of the PM-501



1. Docking Connector

- **Docking Connector**

  Lets you connect the system to docking stand to dock the tablet PC when you are at home or office desk.

2.2. Preparing for Installation

Your PM-501 is designed and pre-configured for easy setup and use. This section describes the installation steps you should follow to get the system running as quickly as possible.

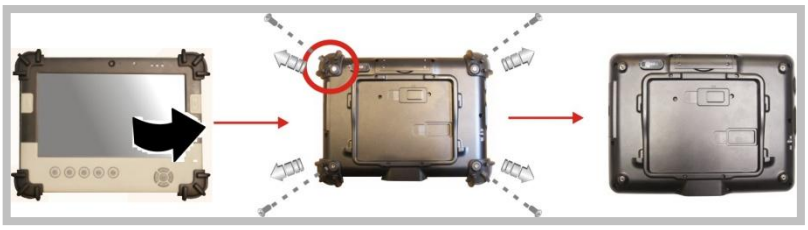
2.2.1. Installing the Rubber Bumpers

To protect the housing case of PM-501, install the rubber bumpers.

1. Place the PM-501 to rear side and install the rubber bumpers to the 4 corners of the system.
2. Screws the rubber bumpers to fix them securely into the system.

2.2.2. Removing the Rubber Bumpers

To remove the rubber bumpers, please place the system to rear side and unscrew the rubber bumpers of the tablet PC.

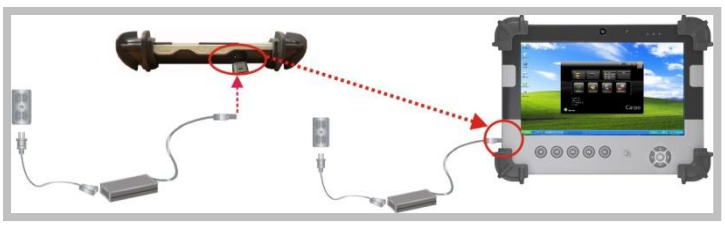


2.2.3. Plugging to the DC supply

The AC adapter provides external power source to your system and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

1. Plug the AC adapter connector to the DC-Jack socket on the left side of the system.
2. Plug the power cord to the AC adapter.



3. Plug the other end of the power cord to a live wall outlet, at the same time, the Power LED at face panel lights up green.

-- For the power supply of this equipment, an approved power cord has to be used.

-- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.

-- Remove all power from the device prior to installing or removing any accessories, hardware, or cables

-- Before cleaning the system, make sure it is disconnected from any external power supplies (i.e. AC adapter).

2.2.4. Starting Your System

The Power/Resume button is found on the left side of the Tablet PC. Press the Power/Resume button to start your system and check that if the Power LED turns on.

After a few seconds, the system's display will turn on and your system will begin to execute the Power On Self Test or POST to check if all system components are running properly. Any error found during the test will be displayed on the screen.

After the test, the screen will also display a message "**press <F2> to enter SETUP**". You don't need to run this program at the moment as your dealer already made the necessary settings for your computer optimal operation.

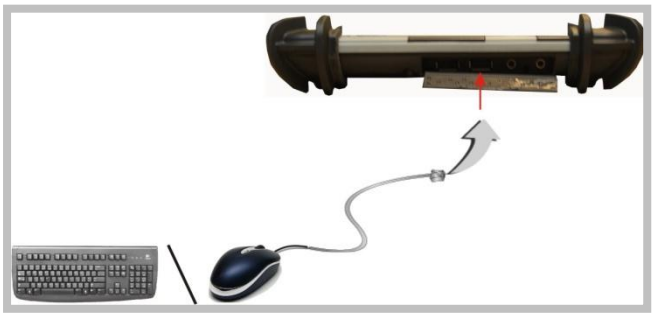
After the test has completed, your computer will start to search and boot up the operating system from your hard drive.

2.2.5. Connecting the keyboard and mouse

Before setting up the system, please make sure the following items are available.

- Keyboard
- Mouse (for system software installation)

A keyboard is an input device; a mouse is a pointing device. Please connect these two devices as graphics shown below to interact with your system.



2.3. Installing the Drivers

If you already have an operating system installed into your Tablet PC, it is best to install the needed device drivers for using the built-in devices of your computer. Before installing the drivers, check with your dealer first if they have already installed all the drivers along with the operating system. If not, follow the procedures below:

Chapter 3

Using the PM-501

3.1. Introduction

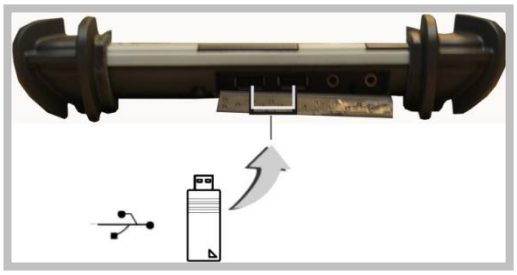
This chapter describes the basic features and procedures for using the panel PC. It includes the I/O ports connecting and the touch screen operation.

3.2. Using the USB Ports

USB (Universal Serial Bus) is a hardware interface that enables you to connect multiple devices (such as printers, mice, keyboards, storage devices, joysticks, digital cameras, and video conference cameras, etc.) to your tablet pc and up to 127 devices can be attached. Besides, USB's hot swap capability allows everything to be plugged in and unplugged without turning the system off.

Microsoft, HP, Compaq, Intel, Agere, NEC and Philip are seven core members of USB-IF to have worked on USB 2.0 standardization. USB 2.0 offers data transfer rate up to 480Mbps (megabits per second) compared to USB 1.1 devices, which transfer at speeds of 12Mbps. So, you could know that USB 2.0 can transfer data between the computer and its peripherals 40 times faster than USB 1.1. However, USB 2.0 is fully backward compatible, you will be able to use a USB 1.1 device in a USB 2.0 compliant system.

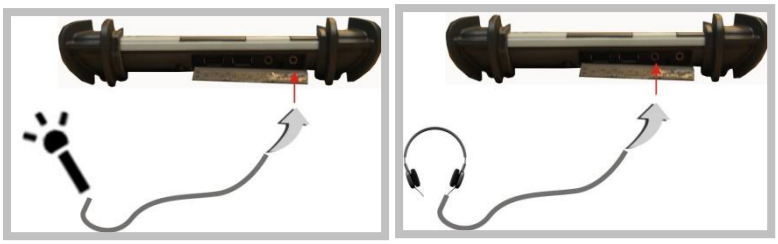
1. Connect the external device to the system.
2. The USB ports support hot plug-in connections. Install the device driver before using the device.



3.3. Using the External Audio System

At the right side of your Tablet PC, you will find the built-in audio ports for connecting Microphone jacks, earphone or powered speaker.
To connect to an audio jack:

1. Locate the audio ports (Microphone and Headphone) that you want to use to the target device.
2. Plug the jack into the port on the right side of the system.

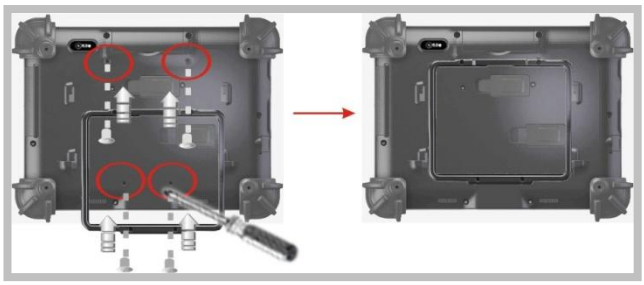


3.4. Installing the Battery (optional)

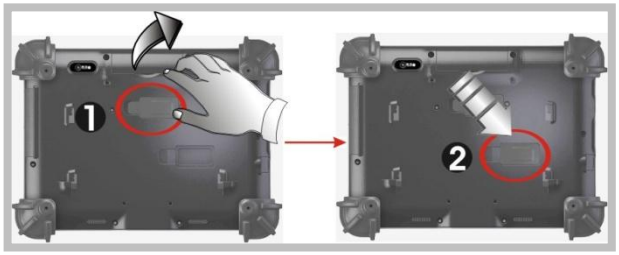
PM-501 provides optional external battery to extend the power of your system.

For installing the battery pack, please follow the steps below:

1. Turn off the system.
2. Align the hook wall at the rear side, then place and screw it fixedly.



3. Remove the cover of the external battery connector (as marked ❶ below) and place it on the lower position (as marked ❷ below).



4. Snap the battery pack into the external battery connector and hook into the hook wall securely.

For removing the external battery, repeat the above steps in reverse order to remove the battery.

3.5. Using a SIM Card

Your PM-501 has a 3.5G HSDPA module that can work with SIM card. (SIM card is always working with

3.5G HSDPA PCI-E Card.)

3.5.1. Inserting a SIM Card

To insert a SIM card into the SIM Card slot:

1. Turn off your System.

The PM-501 must be powered off while the SIM Card is being connected. Otherwise, it is harmful to both devices and it shortens the life of these devices.

2. Unscrew the optional accessory cover on top of the Tablet PC.
3. Make sure the clipped corner facing inward with the metallic label of the card facing up. Push the SIM Card firmly but slowly to the SIM Card slot.

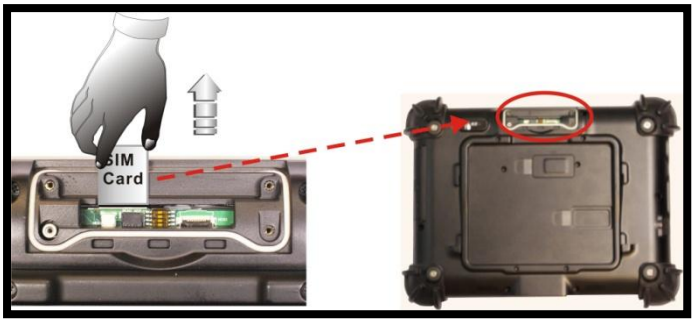
To insert a SIM card into the slot, please pay attention only one correct side can be accepted for the card slot. If you cannot insert the card into the slot or you had inserted the card but it is not recognized by the Tablet PC, please remove the card and insert it again. To prevent the damage made both on card and the slot, never forced an entry into the slot with incorrect side.

4. When the full length of the card is almost inside the slot, the SIM Card will be automatically detected.
5. Place the optional accessory cover back to the place and screw it firmly on top of the system.

3.5.2. Removing a SIM Card

To remove a SIM Card from the SIM Card slot:

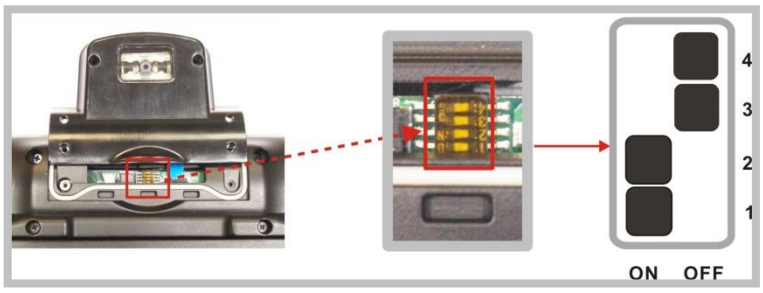
1. Turn off your system.
2. Slightly push the SIM card to pop it out and pull it out directly. When the SIM card has moved out a space out of the slot, hold the edges of the card and slowly slide it out.



3.6. Using a Barcode Scanner Module (optional)

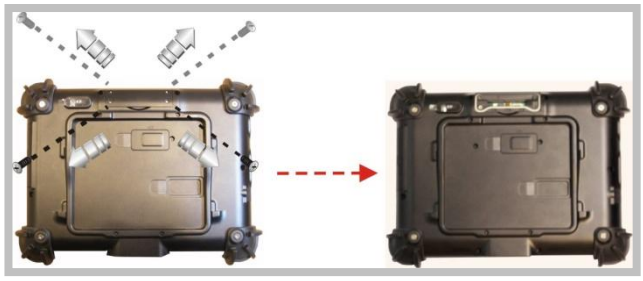
Your PM-501-KE00R00 is designed with equipped the optional Barcode Scanner module.

Before installing the barcode scanner module, please switch the DIP 1/2 to “ON” and DIP 3/4 to “OFF” as indicated in the following graphics.

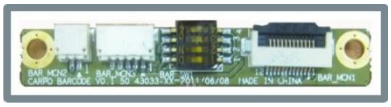


To install the Barcode Scanner Module:

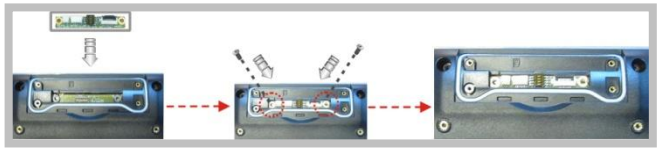
1. Make sure the system is turned off.
2. Unscrew the compartment cover on top of the system.



3. Screw the Barcode/MSR transfer board into the mainboard.

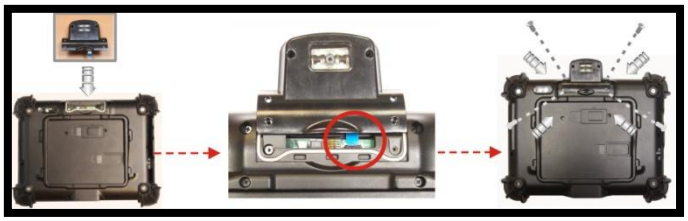


Barcode/MSR Transfer Board



4. Attach the Barcode Scanner connector to the connectors inside the compartment.
5. Screw to secure the Barcode Scanner module onto the system.

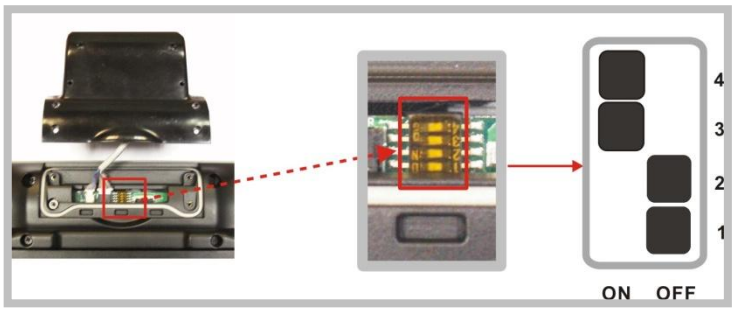
Barcode Scanner Module



3.7. Using a MSR Module (optional)

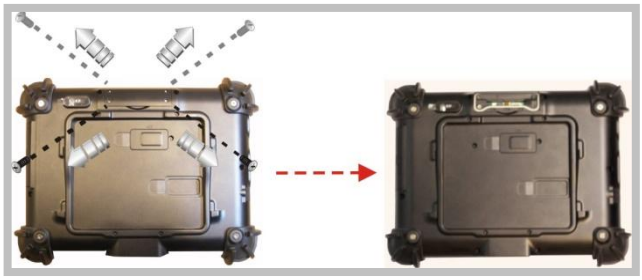
Your PM-501-KE00R00 is designed with equipped the optional MSR module.

Before installing the barcode scanner module, please switch the DIP 1/2 to “OFF” and DIP 3/4 to “ON” as indicated in the following graphics.

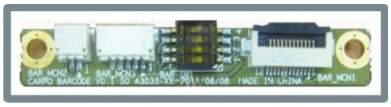


To install the MSR Module:

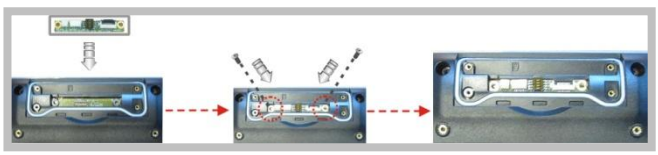
1. Make sure the system is turned off.
2. Unscrew the compartment cover on top of the system.



3. Screw the Barcode/MSR transfer board into the mainboard.

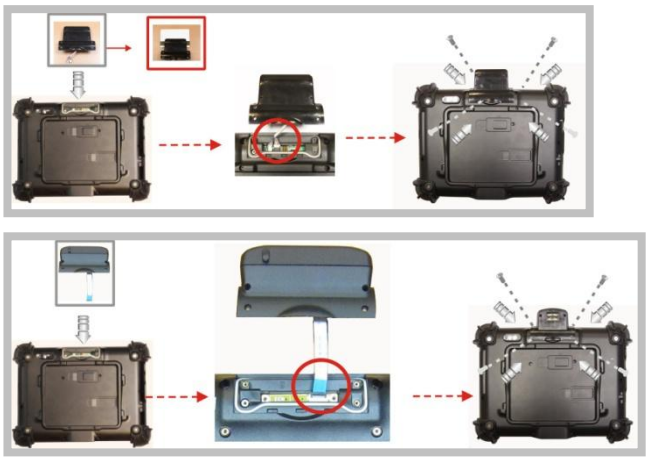


Barcode/MSR Transfer Board



4. Attach the MSR connector to the connectors inside the compartment.
5. Screw to secure the MSR module onto the system.

MSR Module



3.9. Using the Docking Stand (optional)

PM-501 provides optional of docking stand for you to dock this system when you are at your home or on your office desk.

Docking Stand

Docking Connector

Attach the PM-501 to the docking stand by connecting the docking connectors both on the system and the docking stand.

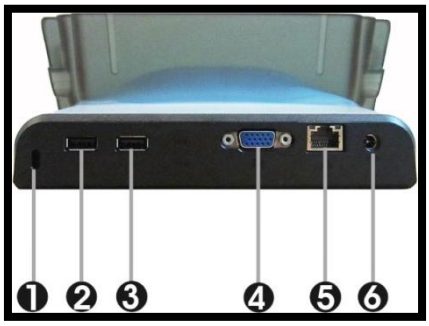
3.9.1. The right side of the Docking Stand

1. USB port 2. USB port

The Universal Serial Bus (USB) port allows you to connect USB 2.0-compliant devices (for example, printers, scanners and so on) to your PM-501.

3.9.2. The rear side of the Docking Stand

The rear side of the docking stand provides the following ports and connectors as described below.

- 

  - 1. Locking Device Keyhole
  - 2. USB port 3. USB port
  - 4. VGA port 5. LAN port
  - 6. DC-Jack

- Locking Device Keyhole
  Lets you attach a Kensington security system or a compatible lock to physically secure your PM-501.

- USB port
  This docking stand lets you use USB connectors to transfer data.
- VGA port
  Lets you attach an external monitor or projector for wider display. You can run the screen display and the external monitor simultaneously.
- LAN port
  An 10Base-T/100Base-TX Ethernet LAN module lets your PM-501 connects to other computers/networks through a local area network (LAN).
- DC-Jack
  Lets you connect the AC power adapter in supplying continuous power to your system and recharging the battery.

Chapter 4

The BIOS Setup Program

This system comes with a chip from Phoenix BIOS that contains the ROM Setup information for your system. (This chip serves as an interface between the processor and the rest of the system components.) This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

The Setup utility program allows updates to the main board configuration settings. The BIOS setup values will be saved in the CMOS. It is executed when you change the system configuration, you change the system backup battery, or the system detects a configuration error and asks you to run the Setup program. You must have connected a USB type of keyboard, and Use the arrow keys to select, and press Enter to run the selected program.

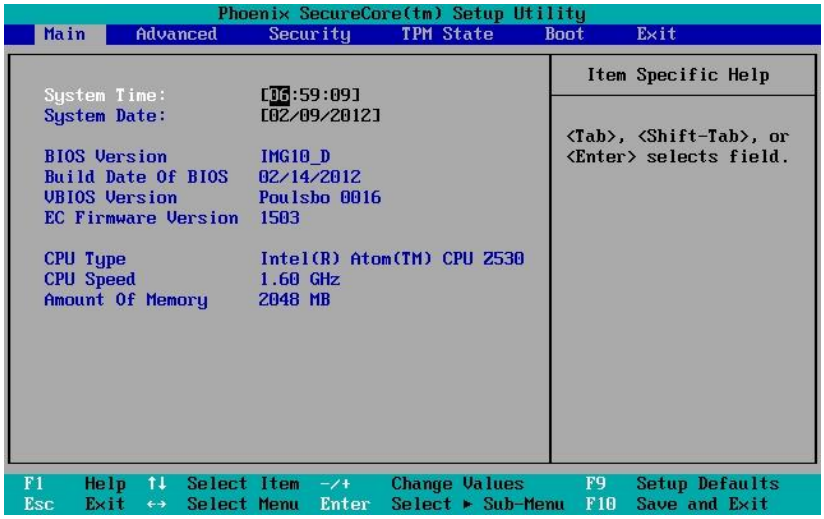
Function Key

Please check the following table for the function description of each direction key.

Function Key (s)	Function Description
← / →	Moves cursor left or right to select Screens
↑ / ↓	Moves cursor up or down to select items
+ / -	To change option for the selected items
<Tab>	To bring up the selected screen
<F1>	To display the General Help screen
<F10>	To save changes and exit the BIOS SETUP UTILITY
<ESC>	To jump to the Exit Screen or exit the current screen

4.1. Main Screen Setup Utility

When you enter the BIOS SETUP UTILITY, the Main screen will appear and display the system overview.

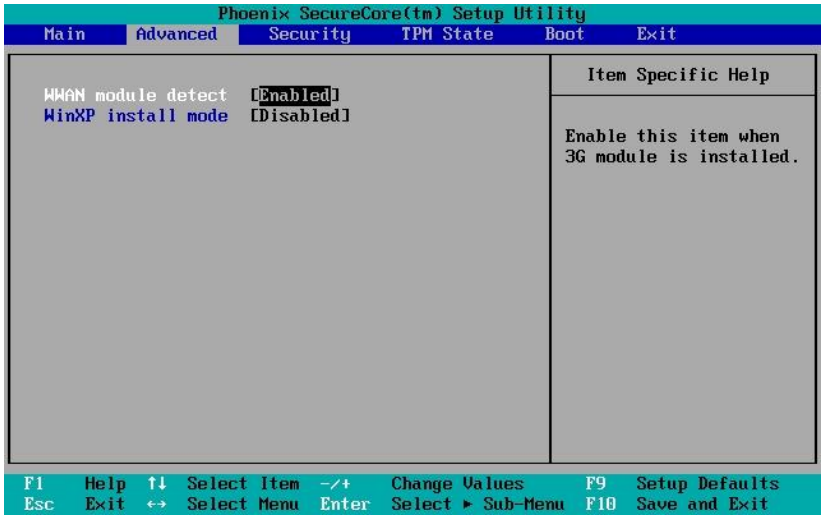


The Standard CMOS Setup screen is displayed above. Each feature may have one or more option settings. Use the arrow keys to highlight the feature you want to change and then use **"↑"**or **"↓"** to select the value you want for that feature.

NOTE: The system BIOS automatically detects BIOS version, Processor, memory size, thus no changes are necessary.

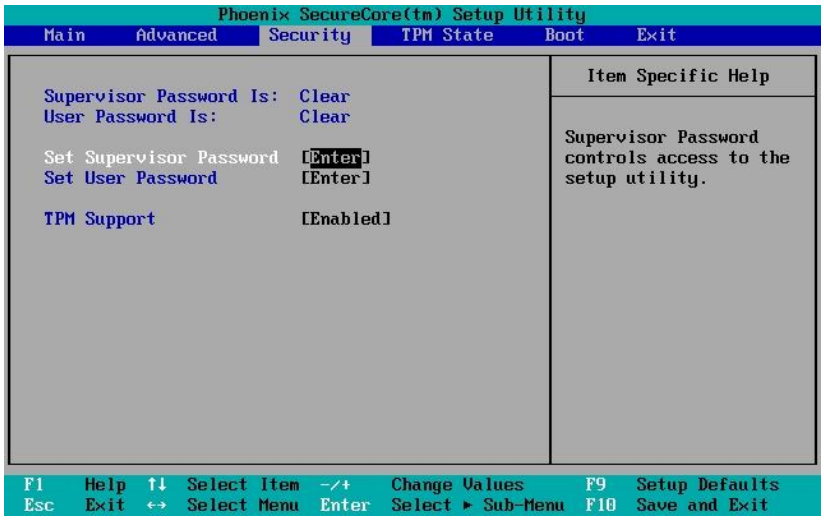
- **System Date**
  To set the date, highlight the Date field and then press +/- keys to set the current date. Follow the month, day and year format.
- **System Time**
  To set the time, highlight the Time field and then press +/- keys to set the current time. Follow the hour, minute, and second format.
- **BIOS Version**
  The system will automatically displays the information of BIOS version.
- **Build Date Of BIOS**
  The system will automatically displays the build time of BIOS.
- **VBIOS Version**
  The system will automatically displays the information of Intel VGA BIOS version.
- **EC Firmware Version**
  The system will automatically displays the information of EC (Embedded Controller) firmware version.
- **CPU Type**
  The system will automatically displays the information of Processor Type.
- **CPU Speed**
  The system will automatically displays the information of Processor Speed.
- **Amount Of Memory**
  The system will automatically displays the information of Total Memory.

4.2. Advanced BIOS Features


Phoenix SecureCore(tm) Setup Utility
Main Advanced Security TPM State Boot Exit
WWAN module detect [Enabled]
WinXP install mode [Disabled]
Item Specific Help
Enable this item when 3G module is installed.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

- **WWAN module detect**
  If the 3G module (optional accessory) is installed, this item should be selected as “Enabled”.
- **WinXP install mode**
  In case of any issue occurred while re-installing Windows XP, this item should be selected as “Enabled”.

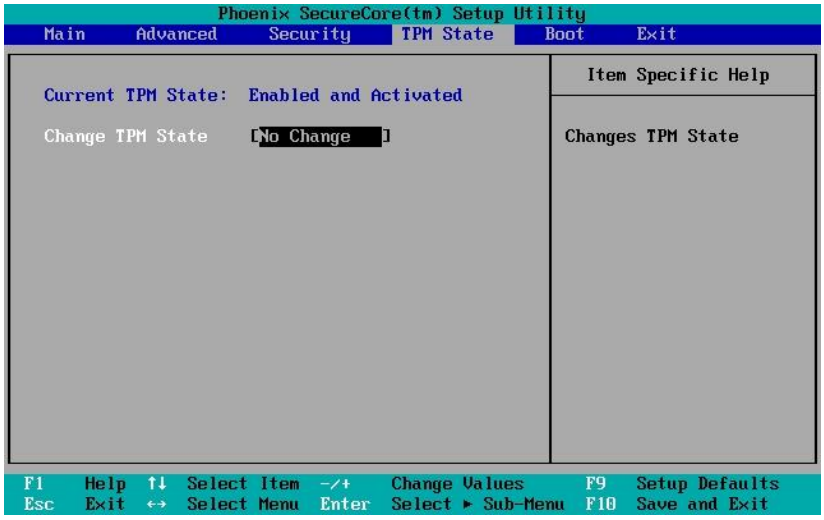
4.3. Security Configuration


Phoenix SecureCore(tm) Setup Utility
Main Advanced Security TPM State Boot Exit
Supervisor Password Is: Clear
User Password Is: Clear
Set Supervisor Password [Enter]
Set User Password [Enter]
TPM Support [Enabled]
Item Specific Help
Supervisor Password controls access to the setup utility.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

- **Supervisor Password Is:**
  This option displays the status of Supervisor Password. If the password is entered, it will display “Set” information, or it will display “Cleared” information when there is no password setting.
- **User Password Is:**
  This option displays the status of User Password. If the password is entered, it will display “Set” information, or it will display “Cleared” information when there is no password setting.
- **Set Supervisor Password**
  This field let user set or clear the Supervisor account’s password.

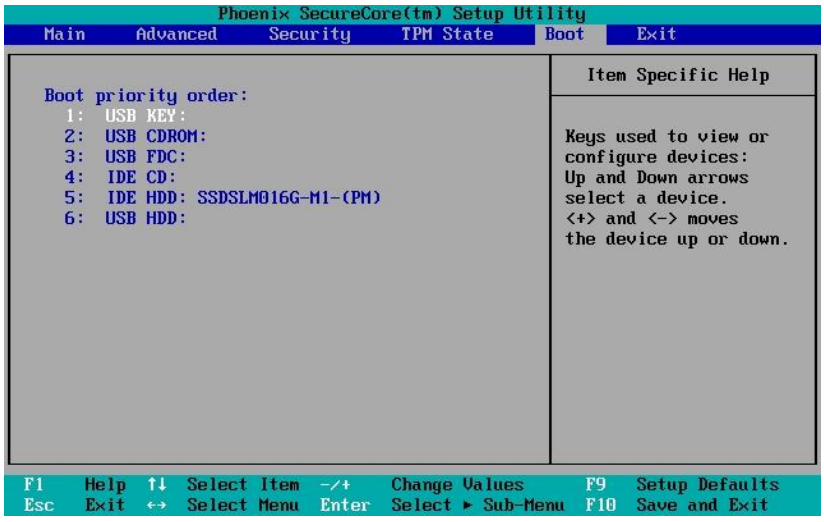
- **Set User Password**
  This field let user set or clear the User account's password.
- **TPM Support**
  This item let user activate or close the TPM function by selecting Enabled or Disabled option. (For the non-TPM SKU, this item will display "no detected".)

4.4. TPM State


Phoenix SecureCore(tm) Setup Utility
Main Advanced Security TPM State Boot Exit
Current TPM State: Enabled and Activated
Change TPM State [No Change]
Item Specific Help
Changes TPM State
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

- **Current TPM State:**
  This item displays the current status of TPM chip.
- **Change TPM State**
  This item let user change the state of TPM chip. There are 4 states could be selected: No change, Enable & Activate, Deactivate & Disable, Clear.

4.5. Boot Management Setup

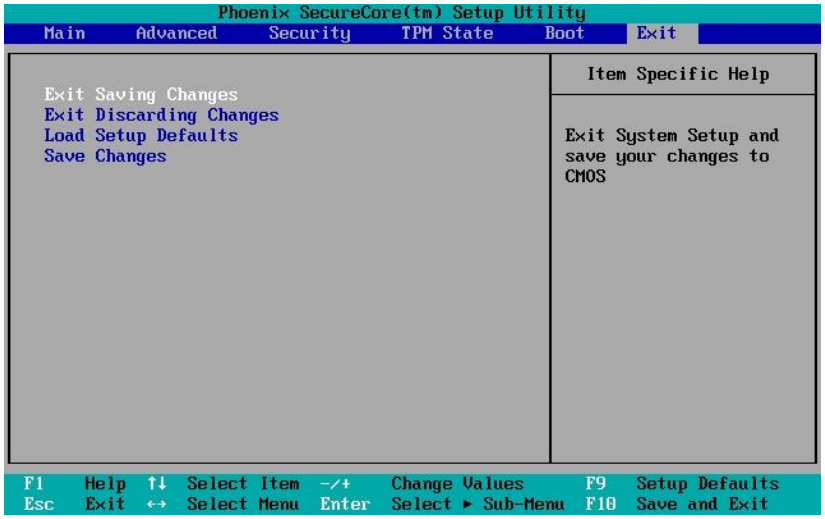

Phoenix SecureCore(tm) Setup Utility
Main Advanced Security TPM State Boot Exit
Boot priority order:
1: USB KEY:
2: USB CDROM:
3: USB FDC:
4: IDE CD:
5: IDE HDD: SSDSLM016G-M1-(PM)
6: USB HDD:
Item Specific Help
Keys used to view or configure devices:
Up and Down arrows select a device.
<+> and <-> moves the device up or down.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

This page allows you to set the search drive sequence where the system will try to boot up first.

To select the boot device, you can use the up or down arrow key, then press <+> to move up the device

in the list or press <-> to move down the device in the list. To exit from this menu, press <**Esc**>.

4.6. Exit Control



- **Exit Saving Changes**
  When you select this option, it will pop-out the following message, “Save configuration changes and exit setup?” Select [OK] to save the changes and exit the BIOS SETUP UTILITY.
- **Exit Discarding Changes**
  When you select this option, it will pop-out the following message, “Discard changes and exit setup?”. Select [OK] to exit the BIOS SETUP UTILITY without saving any changes.
- **Load Setup Defaults**
  When you select this option, it will pop-out the following message, “Load optimal defaults?” Select [OK] to load the default values for all the setup configurations.
- **Save Changes**
  When you select this option, it will pop-out the following message, “Save changes?” Select [OK] to save all changes.

Chapter 5

User Interface for PM-501

5.1. Introduction

This user interface provides specific mobile utility to let you easily setup some helpful functions and aware the system status directly.

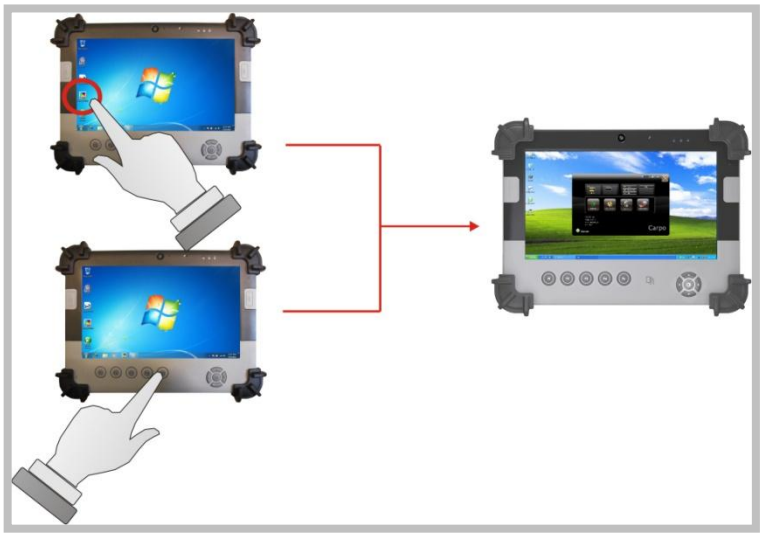
This utility also let you adjust some function to fit the requirements, such as brightness and volume adjustment, webcam launch, screen orientation and monitor switching.

Furthermore, it also provides system information for your reference, such as battery status, RF setting with its signal strength, firmware (BIOS & EC) version information. Besides these features, you can press the soft button to hibernate this device.

5.2. About the User Interface

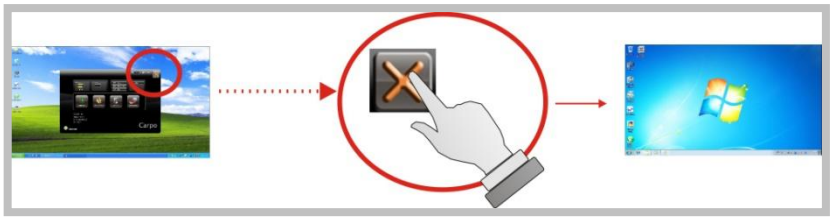
5.2.1 Enable or disable the User Interface

To display the User Interface, please press the Fn button or point the Hot key Utility on the screen.



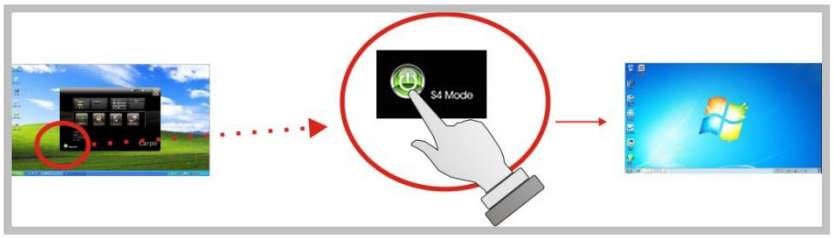
To close the User Interface function, please press the button on the top right corner on this User Interface for disabling this utility from the screen.

If there is no action took for this utility in 5 seconds, the UI screen will close automatically.



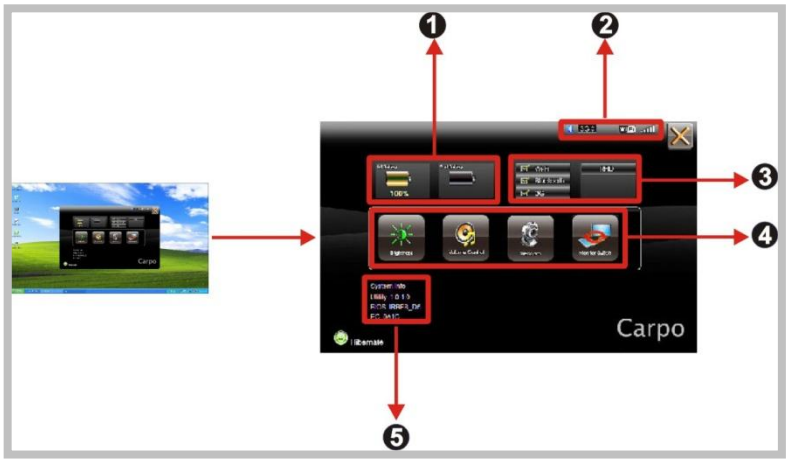
5.2.2 Hibernate this System

If you want to hibernate this system, please click button for entering into S4 mode.



5.2.3 System Status Information

This utility shows you the battery capacity status, RF status with its signal strength and system information, and provides the control panel for the function setting.



For battery capacity status:

The PM-501 is equipped with one internal battery and one optional battery.

The battery capacity status shown below advises you, that only one internal battery is embedded with the system with fully charged, and there is no optional battery installed in the system.

If the system installs both the 1st internal battery and 2nd optional battery, the graphics shown below indicates the charging status.

If 1st battery capacity is down to 15%, the system will display the following warning message for 5 seconds

For RF status:

The following RF status shows you that the system is equipped with Wi-Fi, Bluetooth, and 3G functions. Moreover, there are optional modules for RFID and GPS. If you want to close either of these functions, please see section for how to re-set it up.

The following signal strength shows you that the Wi-Fi function is connecting currently, the stronger the signal strength, the more scale will show on the bar. If there is no module in the system, there will be no status scale in the following status bar.

For System Information:

The system information shown on the left advises you the utility version, BIOS and EC version and you can use them for customer service.

5.3. Using the Application

Your PM-501 has numbers of applications on the control panel for executing specific command. It provides you to adjust brightness, volume, launch webcam, make screen orientation and switch monitor.

5.3.1 Brightness Control

For brightness adjustment, press the **Brightness** command.

When you press it, the brightness control panel is appeared as follows:

- You can click or to reduce or increase the brightness.
- Also, you can slide the scale bar to set the brightness.
- Since the system supports the light sensor, if you tick the brightness Auto adjustment , the screen brightness will automatically adjust according to the operating environment.

5.3.2 Volume Control

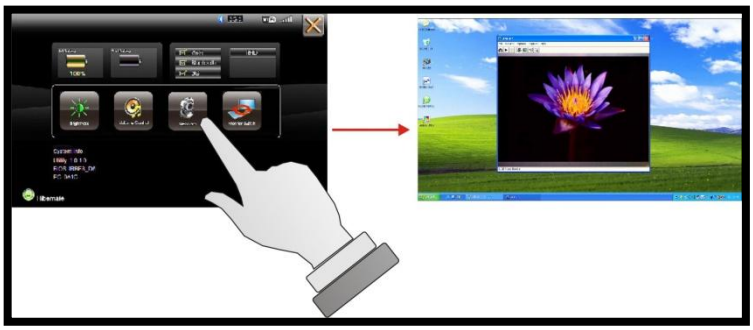
For Volume adjustment, press the **Volume** command.

When you press it, the Volume control panel is appeared as follows:

- You can click or to reduce or increase the audio volume incrementally.
- Also, you can slide the scale bar to set the audio volume.
- You can tick the **Mute** to make the system voiceless.

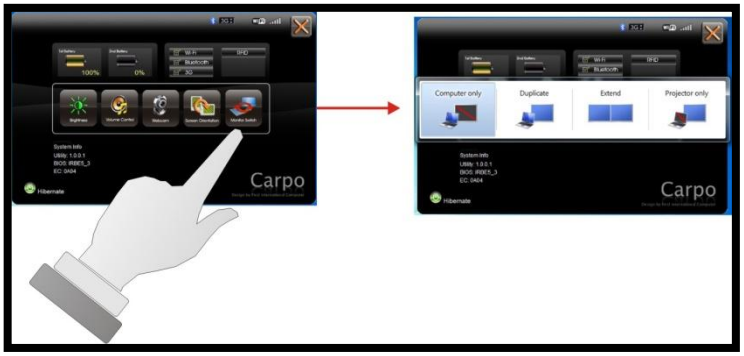
5.3.3 Webcam Launch

For Webcam Launch, press the **Webcam** command to appear the Webcam utility for your application.

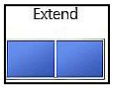


5.3.4 Monitor Switch

For Monitor switch, press the Monitor Switch to pop-up the selection bar for choosing the display mode within following four options.



- You can click **Computer only** to display the PM-501 screen only.
- You can click **Duplicate**

to display the same contents both on the PM-501 screen and external display device. The resolution on these two display modes are same, it is not available to adjust the resolution on the external display mode.
- You can click **Extend** 

to display the different contents on the PM-501 screen and external display device. You only can adjust the resolution on the external display device.
- You can click **Projector only**

to display on external projector only.

Chapter 6

Maintenance

Your PM-501 needs occasional cleaning to prolong their life. Please read this section carefully to ensure proper care of PM-501. When it is necessary to clean it, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use petroleum-based solvents, or harsh detergents to clean the system. Also never spray any liquids directly on the computer case or screen. If the display screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen matte.

6.1. Maintaining the Battery

- Do not expose heat or attempt to disassemble the battery, and do not place the battery in water or in a fire.
- Do not subject the battery to strong impact, such as a blow from a hammer, or stepping on or dropping it.
- Do not puncture or disassemble the battery.
- Do not attempt to open or service the battery.
- Replace only with batteries designed specifically for this product.
- Keep the battery out of reach of children.
- Dispose of used batteries according to local regulations.

6.2. Maintaining the LCD Display

- Do not scratch the surface of the screen with any hard objects.
- Do not spray liquid directly on the screen or allow excess liquid to drip down inside the device.
- Do not place anything, such as food and drink, on the screen at any time to prevent damage to the screen.
- Clean the LCD display only with a soft cloth dampened with denatured alcohol or a proprietary LCD screen cleaner.

6.3. Cleaning the PM-501

- Turn off the PM-501 and unplug the power cord.
- Wipe the screen and exterior with a soft, damp cloth moistened only with water. Do not use liquid or aerosol cleaners on the screen, as these will discolor the finish and damage the screen.
-